320en14

Notes

14

DEPRECIATION

Expenditure on assets of the business like furniture, fixtures and fittings of the shop, motor vans, machines and equipments are neither goods nor expenses of a year. Expenditures of this nature give services to the business for many years and therefore called fixed assets. If the expenditure on the fixed assets is deducted from the profit of any one year, it would be wrong. Since their benefit is enjoyed by the business for more than one years. The correct thing will be to distribute their cost over the years of their useful life to the business. The portion of the cost of fixed assets charged each year as expense is named as depreciation.

In this lesson you will learn about the meaning and methods of charging depreciation and how depreciation is recorded in the books of accounts, together with the preparation of Fixed Assets account.

OBJECTIVES

After studying this lesson you will be able to:

- understand the meaning and concept of depreciation;
- explain the causes of depreciation;
- explain the objectives of depreciation;
- explain the factors affecting depreciation
- learn methods of charging depreciation and
- prepare fixed asset account showing the amount of depreciations charged for every year.

14.1 MEANING OF DEPRECIATION

You already know the meaning of terms assets and liabilities. Assets are broadly divided into two categories- current assets (cash, debtors or customers balances, stock of materials and goods) and fixed assets (buildings, furniture and fixtures, machinery and plant, motor vehicles).

Fixed assets are also called long term assets as they provide benefits to the business for more than one year. Most fixed assets lose their value over time as these are put in use and as the years pass by. The fixed assets lose their usefulness due to arrival of new technologies and change of fashions etc. These are then generally required to be replaced, as their useful life is over. Hence, the cost of a fixed asset is allocated over its useful life. Each year's allocation of the cost is charged as depreciation expense for that year.

For example an office chair is purchased for ₹ 2,500 and it is estimated that after ten years it will be scraped. The useful life of the chair is ten years over which the cost of ₹ 2,500 will be distributed. Each year's allocation may be calculated as ₹ 250.

Thus, ₹ 250 is the depreciation expense for each year.

Depreciation, thus, is an expense charged during a year for the reduction in the value of fixed assets, arising due to:

- Normal wear and tear out of its use and passage of time
- Obsolescence due to change in technology, fashion, taste and other market conditions

14.2 CAUSES OF DEPRECIATION

Following are the causes for which depreciation is provided :

i) Normal wear and tear

(a) Due to usage - Every asset has a life for which it can run, produce or give service. Thus, as we put the asset to use its worth decreases. Like decrease in the efficiency and functioning of a bicycle due to its running and usage.

(b) Due to passage of Time – As the time goes by elements of nature, wind, sun, rain etc, cause physical deterioration in the worth of an asset. Like reduction in the worth of a piece of furniture due to passage of time even when it is not used.

ii) Obsolescence

(a) Due to development of improved or superior equipment : Sometimes fixed assets are required to be discarded before they are actually worn out due to either of the above reasons. Arrival of superior equipments and machines etc.

allow production of goods at lower cost. This makes older equipments worthless as production of goods with their use will be costlier and non competitive. For example, Steam engines became obsolete with the arrival of diesel and electric locomotives.

(b) Due to change in fashion, style, taste or market conditions : Obsolescence may also result due to decline in demand for certain goods and services with a change in fashion, style, taste or market conditions. The goods and services that are no longer in vogue lead to decrease in the value of the assets which were engaged in their production - like factories or machines meant for making old fashioned hats, shoes, furniture etc.

Loss in the value of fixed assets for such reasons is called obsolescence and also charged as depreciation.

14.3 OBJECTIVES OF CHARGING DEPRECIATION

Following are the objectives of charging depreciation of Assets:

i) **To show the True Financial Position of the Business :** Fixed Assets have some effective working life during which it can be economically operated. Depreciation is the gradual loss in the value of fixed assets. If depreciation is not provided, profit and loss A/c will not disclose the true profit made during the accounting period. At the same time, the Balance Sheet will not disclose the true Financial position as Fixed assets appearing in the Balance Sheet will be over valued. If depreciation in ignored year after year, ultimately when asset is worn out, the proprietor will not be is a position to continue the business smoothly.

ii) **To retain funds in the business for replacement of the asset :** Net profit is the yield of the capital invested by proprietor and may be wholly withdrawn by him in the form of cash. If depreciation is provided, this figure of net profit will be reduced and the amount withdrawn by the proprietor will also be decreased. As such the cash equivalent to the charge for depreciation will be left over in the business. This accumulated amount will enable the proprietor to replace to a new asset.

INTEXT QUESTIONS 14.1

Fill in the blanks :

i. Depreciation represents a _____ in the value of fixed assets.

Notes

ii. Scrap value of an asset means the _____ that it will fetch on sale at the end of its _____.

iii. Depreciation is calculated as cost of assets less scrap value divided by _____.

iv. Obsolescence is one of the situations on fixed assets which arises due to change in _____, fashion, taste and other market conditions.

14.4 FACTORS AFFECTING THE DEPRECIATION

Following are the factors that affect the amount of depreciation to be charged on an asset.

i) Cost of Asset : Cost of asset is the purchase price of the asset and includes all such expenses which are incurred before it is first put to use. For example expenses on loading, carriage, installation, transportation and unloading of the asset up to the point of its location, expense on its erection and assembly.

ii) Useful Life of the Asset : Useful life is the expected number of years for which the asset will remain in use.

iii) Scrap Value : Scrap value is the residual value at which the asset could be sold to scrap dealer *(Kabari)* after its useful life.

iv) Depreciable value of asset : Depreciable value is the cost of asset minus the scrap value.

Illustration 1

A generator was purchased for ₹ 5,00,000. ₹ 1,500 was paid for the crane for its loading on the truck, ₹ 7,000 was paid for transporting the generator to the factory. ₹ 2,000 was spent on its unloading at the factory site. The generator was estimated to run for 10 years and thereafter would be saleable for ₹ 60,000. Calculate the depreciable value of the generator.

The cost of the asset is :

Purchase price	₹ 5,00,000
Expenses on Loading	₹ 1,500
Transportation	₹ 7,000
Expenses on unloading	₹ 2,000
Total	**₹ 5,10,500**

The useful life of the generator is 10 years

Depreciable Value = Cost of Asset - Scrap Value

= ₹ 5,10,500 – ₹ 60,000 = ₹ 4,50,500

14.5 METHOD OF CHARGING DEPRECIATION

Most popularly used methods for charging depreciation are: i. Straight Line Method and ii. Diminishing Balance Method

Straight Line Method of Charging Depreciation

Under this method, the amount of depreciation is uniform from year to year. Suppose, if an asset costs ₹ 1,00,000 and depreciation is fixed @ 10%, then ₹ 10,000 would be written off every year. That is why this method is also called 'Fixed Installment Method' or 'Original Cost Method'. In this method, the amount to be written off every year is arrived at as under:

$$\textbf{Depreciation of Each Year} = \frac{\textbf{Cost of Assets — Estimated Scrap Value}}{\textbf{Number of years of expected life}}$$

Out of the cost of the asset, its scrap value is deducted and it is divided by the number of years of its estimated life.

For example: a machine is purchased for ₹ 1,20,000 and it is estimated that its useful life is 10 years. After its useful life its scrap value is ₹ 20,000. Depreciation of one year can be calculated as under:

$$\textbf{Depreciation of one Year} = \frac{\textbf{₹ 1,20,000 — ₹ 20,000}}{\textbf{₹ 10}} = \textbf{₹ 10,000}$$

If its scrap can not be sold or no money can be realized from its scrap, then depreciation of one year is:

$$\textbf{Depreciation of one Year} = \frac{\textbf{₹ 1,20,000}}{\textbf{₹ 10}} = \textbf{₹ 12,000}$$

In this method the amount of depreciation is same for each year. Therefore, this method is called Straight Line Method, Fixed Installment Method or Original Cost Method.

Illustration 2

A machine was purchased on January 1, 2011 for ₹ 1,00,000 and its useful life is 10 years. After completing its useful life the machine will be scraped and nothing will be realized from it. It is decided to charge depreciation on this machine @ 10% p. a. on Straight Line Method.

Calculate amount of depreciation for each year during the useful life of this machine.

Year	Rate of Depreciation	Amount of Depreciation (₹)
2011	10%	10,000
2012	10%	10,000
2013	10%	10,000
2014	10%	10,000
2015	10%	10,000
2016	10%	10,000
2017	10%	10,000
2018	10%	10,000
2019	10%	10,000
2020	10%	10,000

Amount of depreciation is same every year, so this method is called 'Straight Line Method' or 'Fixed Instalment Method' or 'Original Cost Method'.

Merits of Straight Line Method

i) **Simplicity :** Calculation of depreciation under this method is very simple and therefore, the method is widely popular. Once the amount of depreciation is calculated, the same amount is written off as depreciation each year. Hence, this method is simple and calculations are easier to understand.

ii) **Asset is completely Written Off :** Under this method, the book value of an asset is reduced to net scrap value or zero value. In other words, in the books of accounts the value of the asset at the end of its useful life is equal to zero or its residual value.

Limitations of Straight Line Method

i) **Difficulty in Computation :** When there are various machines having different life-spans, the computation of depreciation becomes complicated because the depreciation on each machine will have to be calculated separately for each asset.

ii) **Illogical :** It is well known that the expense on its repairs and maintenance increases as the asset becomes older. Thus, the total burden on Profit and Loss Account,

depreciation plus repair expenses, is more in later years in comparison to earlier years. This is illogical because the efficiency and productivity of the asset is more in earlier years and less in later years.

Illustration 3

X limited purchased a machine on April 1, 2014 for ₹ 1,00,000 whose life was expected to be 10 years. Its estimated scrap value at the end of 10 years was ₹ 10,000. Find the amount of depreciation to be charged to Profit and Loss Account every year. Calculate the rate on which depreciation is to be charged every year.

Solution

In this question the information available is as under: The amount of depreciation that will be charged to Profit and Loss Account will be calculated as :

(i) Calculation of amount of depreciation

$$\text{Annual Depreciation} = \frac{\text{Cost of Machine} - \text{Estimated Scrap Value}}{\text{Expected Life of the Asset}}$$

$$= \frac{₹\ 1,00,000 - ₹\ 10,000}{10} = ₹\ 9,000$$

(ii) Calculation of Rate of Depreciation

$$\text{Rate of Depreciation} = \frac{\text{Annual Depreciation Amount X 100}}{\text{Cost of Asset}}$$

$$= \frac{₹\ 9,000\ X\ 100}{₹\ 1,00,000} = 9\%$$

Illustration 4

Salman and Usman Bros. acquired a machine on July 1, 2014 at a cost of ₹ 70,000 and spent ₹ 5,000 on its installation. The firm writes off depreciation @ 10% on straight line method. The books are closed on December 31 every year. Show the machinery and depreciation account for three years.

Solution

Cost of Machine	₹ 70,000
Cost of Installation	₹ 5,000
Total	₹ 75,000
Rate of Depreciation	10%.

Then annual depreciation will be 10% of 75000 = ₹ 7,500.

Dr. **Depreciation Account** **Cr.**

Date	*Particulars*	*J.F.*	*Amount*	*Date*	*Particulars*	*J.F.*	*Amount*
2014				**2014**			
Dec. 31	To Machinery A/c		3,750	Dec.31	By P & L A/c		3,750
2015				**2015**			
Dec. 31	To Machinery A/c		7,500	Dec.31	By P & L A/c		7,500
2016				**2016**			
Dec. 31	To Machinery A/c		7,500	Dec.31	By P & L A/c		7,500

Dr. **Machinery Account** **Cr.**

Date	*Particulars*	*J.F.*	*₹*	*Date*	*Particulars*	*J.F.*	*₹*
2014				**2014**			
July 01	To Bank A/c		70,000	Dec. 31	By Depreciation A/c $7000\times\frac{10}{100}\times\frac{6}{12}$		3,750
July 01	To Bank A/c		5,000	Dec. 31	By Balance c/d		71,250
			75,000				75,000
2015				**2015**			
Jan. 01	To Balance b/d		71,250	Dec. 31	By Depreciation A/c $75000\times\frac{10}{100}$		7,500
					By Balance c/d		63,750
			71,250				71,250
2016				**2016**			
Jan. 01	To Balance b/d		63,750	Dec. 31	By Depreciation A/c $75000\times\frac{10}{100}$		7,500
				Dec. 31	By Balance c/d		56,250
			63,750				63,750

Illustration 5

On April 1, 2014, a company purchased machinery worth ₹ 1,00,000 . On October 1, 2016, it purchased additional machinery worth ₹ 20,000 and spent ₹ 2,000 on its erection. The accounts are closed each year on March 31. Assuming the annual depreciation to be 10%, show the Machinery Account for 5 years under the straight line method.

Notes

Solution

Dr. **Machinery Account** **Cr.**

Date	*Particulars*	*J.F.*	₹	*Date*	*Particulars*	*J.F.*	₹
2014				**2015**			
Apr. 01	To Bank A/c		1,00,000	Mar. 31	By Depreciation A/c		10,000
					$1,00,000 \times \frac{10}{100}$		
				Mar. 31	By Balance c/d		90,000
			1,00,000				1,00,000
2015				**2016**			
Apr. 1	To Balance b/d		90,000	Mar. 31	By Depreciation A/c		10,000
					$1,00,000 \times \frac{10}{100}$		
				Mar. 31	By Balance c/d		80,000
			90,000				90,000
2016				**2017**			
Apr. 1	To Balance b/d		80,000	Mar. 31	By Depreciation A/c		11,100
Oct. 1	To Bank A/c		20,000		$1,00,000 \times \frac{10}{100}$		
	To Bank A/c		2,000		$22,000 \times \frac{10}{100} \times \frac{6}{12}$		
				Mar. 31	By Balance c/d		90,900
			1,02,000				1,02,000
2017				**2018**			
Apr. 1	To Balance b/d		90,900	Mar. 31	By Depreciation A/c		12,200
					$1,00,000 \times \frac{10}{100}$		
					$22,000 \times \frac{10}{100}$		
				Mar. 31	By Balance c/d		78,700
			90,900				90,900
2018				**2019**			
Apr. 1	To Balance b/d		78,700	Mar. 31	By Depreciation A/c		12,200
					$1,00,000 \times \frac{10}{100}$		
					$22,000 \times \frac{10}{100}$		
				Mar. 31	By Balance c/d		66,500
			78,000				78,700
2019							
Apr. 1	To Balance b/d		66,500				

Illustration 6

On 1st January, 2014 a Company purchased a plant for ₹ 20,000. On 1st July in the same year, it purchased additional plant worth ₹ 8,000 and spent ₹ 2,000 on its erection. On 1st July, 2015, the plant purchased on 1st jan., 2014 having become obsolete, was sold off for ₹ 12,500. On 1st October, 2016, fresh plant was purchased for ₹ 28,000 and on the same date, the plant purchased on 1st July, 2014 was sold at ₹ 6,000.

Depreciation is provided at 10% per annum on original cost on 31st December every year. Show the plant account for 2014 to 2016.

Solution

Dr. **Plant Account** **Cr.**

Date	Particulars	J.F.	₹	Date	Particulars	J.F.	₹
2014				**2014**			
Jan. 01	To Cash A/c		20,000	Dec. 31	By Depreciation A/c		
July 01	To Cash A/c		8,000		(i) for a year 2,000		
	To Cash A/c				(ii) for six months 500		2,500
	(expenses)		2,000		By Balance c/d		
					(i) 18,000		
					(ii) 9,500		27,500
			30,000				30,000
2015				**2015**			
Jan. 1	To Balanc b/d			July 1	By Cash A/c (sale)		12,500
	(i) 18,000			Dec. 31	By Depreciation A/c (i)		1,000[1]
	(ii) 9,500		27,500		By Profit & Loss A/c		4,500[1]
				Dec. 31	By Depreciation A/c (ii)		1,000
				Dec. 31	By Balance c/d		
					(₹ 9,500 - ₹ 1,000)		8,500
			27,500				27,500
2016				**2016**			
Jan. 1	To Balance b/d (ii)		8,500	Oct. 1	By Cash A/c (sale)		6,000
Oct. 1	To Cash A/c (iii)		28,000	Oct. 1	By Depreciation A/c (ii)		750[2]
				Oct. 1	By Profit & Loss A/c (loss)		1,750
				Dec. 31	By Depreciation A/c (iii)		
					(28,000 x 10/100 x 3/12)		700
				Dec. 31	By Balance c/d		
					(₹ 28,000 - ₹ 700)		27,300
			36,500				36,500

Note : Calculation of loss on sale of plant :

		₹
(i)	On 1-1-2015 book value of the plant sold [Plant (i)]	18,000
	Less : Depreciation for 6 months *i.e.* 20,000 x 10/100 x 6/12	1,000

	On 1-7-2015 book value of plant sold	17,000
	Less : Sale price of plant	12,500
	Loss on sale of plant	4,500
(ii)	On 1-1-2016 book value of plant sold [Plant (ii)]	8,500
	Less : Depreciation for 9 months is 10,000 x 10/100 x 9/12	750
	On 1-10-2016 book value of plant sold	7,750
	Less : Sale Price	6,000
	Loss on Sale of Plant	1,750

INTEXT QUESTIONS 14.2

Fill in the blanks :

i. The assumption underlying the fixed installment method of depreciation is that the amount of the fixed assets over different years of its useful life remains the _____.

ii. Straight line method of charging depreciation is also known as _____ or _____.

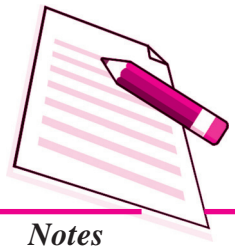
iii. Under straight line method the value of the assets at the end of its useful life is equal to _____ or its _____.

iv. Under straight line method the total burden on Profit and Loss Account in comparision to earlier years is _____.

(2) Diminishing Balance Method

Under this method, as the value of asset goes on diminishing year after year, the amount of depreciation charged every year goes on declining. The amount of depreciation is calculated as a fixed percentage of the diminishing value of the asset shown in the books at the beginning of each year. Under this method the value of an asset never comes to zero.

Suppose, the cost of the asset is ₹ 40,000 and the percentage to be written off each year is 10%. In the first year the amount of the depreciation will be ₹ 4,000 i.e., 10% of ₹ 40,000. This will reduce the book value to ₹ 36,000 i.e. ₹ 40,000 – ₹ 4,000. Now, at the beginning of the next year the book value is ₹ 36,000. The amount of the depreciation for the next year will be ₹ 3,600, i.e., 10% of ₹ 36,000. Thus, every year the amount of the depreciation will go on reducing. This method of charging depreciation is also known as Reducing Balance Method or written down value method.



Notes

Illustration 7

A machine was purchased on January 1, 2014 for ₹ 1,00,000 and its useful life is 10 years. After completing its useful life the machine will be scraped and ₹ 4,000 will be realized from it. It is decided to charge depreciation on this machine @ 10% p. a. on Diminishing Balance Method.

Calculate amount of depreciation for each year during the useful life of this machine.

Solution

Year	Rate of Depreciation	Amount of Depreciation
2014	10%	10,000
2015	10%	9,000
2016	10%	8,100
2017	10%	7,290
2018	10%	6,561
2019	10%	5,905
2020	10%	5,314
2021	10%	4,783
2022	10%	4,305
2023	10%	3,874

Amount of depreciation is decreased year after year in this method that is why this method is called 'Diminishing Balance Method' or 'Reducing balance method' or 'written down value method'.

Merits of Diminishing Balance Method

Equal Burden on Profit & Loss Account

During the initial years the productivity of the asset is more hence its contribution to profit is also relatively greater. Therefore, the cost charged in terms of depreciation should also be greater.

In the initial year, the depreciation charges are more and repair expenses are less. In later years, depreciation charges are less and repair expenses are more. Hence the total burden of depreciation plus repair expenses, is some what equal on Profit & Loss Account for each year.

Demerits of Diminishing Balance Method

i) **Asset cannot be completely written off :** Under this method, the value of an asset is not reduced to zero even when there is no scrap value.

ii) **Complexity :** Under this method, the rate of depreciation cannot be determined easily.

INTEXT QUESTIONS 14.3

Fill in the blanks with suitable words

i. Depreciation represents a _____ in the value of fixed assets.

ii. The amount of depreciation on machinery is credited to _____ account.

iii. Depreciation is calculated on _____ under the straight line method.

iv. Depreciation is calculated on _____ under the diminishing balance method.

v. The value of an asset is not reduced to _____ even when there is no scrap value in diminishing balance method of depreciation.

Illustration 8

Widson enterprise purchased Plant and Machinery for ₹ 1,00,000 on 1st October 2012. It decided to write off depreciation 20% per annum on Written Down Value Method. On 1st January, 2015 purchased additional Machinery for ₹ 40,000.

Show Machinery Account upto the year ending 31st March, 2016. The accounting year ends on 31st March.

Solution

Dr. **Plant and Machinery Account** **Cr.**

Date	Particulars	J.F.	₹	Date	Particulars	J.F.	₹
2012				**2013**			
Oct. 01	To Bank		1,00,000	Mar. 31	By Depreciation (for six months)		10,000
					By Balance c/d		90,000
			1,00,000				1,00,000
2013				**2014**			
Apr. 01	To Balance b/d		90,000	Mar. 31	By Depreciation (on ₹ 90,000 for one year)		18,000
					By Balance c/d		72,000
			90,000				90,000

2014				**2015**			
Apr. 01	To Balance b/d		72,000	Mar. 31	By Depreciation (On ₹ 72,000) for one year ₹ 14,400		
2015					On ₹ 40,000 for 3 months ₹ 2,000		16,400
Jan. 01	To Bank		40,000		By Balance c/d		95,600
			1,12,000				1,12,000
2015				**2016**			
Apr. 01	To Balance b/d		95,600	Mar. 31	By Depreciation (On ₹ 95,600 for one year)		19,120
					By Balance c/d		76,480
			95,600				95,600
2016							
Apr. 01	To Balance b/d		76,480				

Illustration 9

On April 1, 2014 Ganga Bros. purchased two machines for ₹ 75,000 each. Depreciation at the rate of 10% on diminishing balance method was provided. On March 31, 2016, one machine was sold for ₹ 55,000. An improved model with a cost of ₹ 80,000 was purchased on the same day. You are required to show the Machinery Account for 2014-15 to 2015-16. The accounting year ends on 31st March.

Solution

Dr. **Machinery Account** **Cr.**

Date	*Particulars*	*J.F.*	₹	*Date*	*Particulars*	*J.F.*	₹
2014				**2015**			
Apr. 01	To Bank		1,50,000	Mar. 31	By Depreciation A/c		15,000
				Mar. 31	By Balance c/d		1,35,000
			1,50,000				1,50,000
2015				**2016**			
Apr. 01	To Balance b/d		1,35,000	Mar. 31	By Depreciation A/c		13,500
2016							
Mar. 31	To Bank A/c		80,000	Mar. 31	By Bank A/c		55,000
					By P & L A/c		5,750
					By Balance c/d		1,40,750
			2,15,000				2,15,000
2016							
Apr. 01	To Balance b/d		1,40,750				

Note : Calculation of loss on sale of machine :

Initial Cost	75,000
Dep. in 2015	- 7,500
Book Value in 2015	67,500
Dep. in 2016	- 6,750
Book Value in 2016	60,750
Sale Price	- 55,000
Loss on Sale	5,750

Illustration 10

On October 1, 2014, the Akash Transport Company purchased a Truck for ₹ 8,00,000. On April 1, 2016, this Truck was involved in an accident and was completely destroyed and ₹ 6,00,000 were received from Insurance Company in full settlement. On the same date another Truck was purchased by the company for ₹ 10,00,000. The company writes off 20% depreciation p. a. on written down value method. Give the Truck Account from 2014 to 2016. The accounting year ends on 31st December.

Solution

Dr. **Truck Account** **Cr.**

Date	*Particulars*	*J.F.*	₹	*Date*	*Particulars*	*J.F.*	₹
2014				**2014**			
Oct. 01	To Bank A/c		8,00,000	Dec. 31	By Depreciation A/c $8,00,000 \times \frac{20}{100} \times \frac{3}{12}$		40,000
				Dec. 31	By Balance c/d		7,60,000
			8,00,000				8,00,000
2015				**2015**			
Jan. 01	To Balance b/d		7,60,000	Dec. 31	By Depreciation A/c $7,60,000 \times \frac{20}{100}$		1,52,000
				Dec. 31	By Balance c/d		6,08,000
			7,60,000				7,60,000

2016				2016			
Jan. 01	Balance b/d		6,08,000	Apr. 01	By Bank A/c		6,00,000
Apr. 01	To P & L A/c		22,400	Apr. 01	By Depreciation A/c $6,08,000 \times \frac{20}{100} \times \frac{3}{12}$		30,400
Apr. 01	To Bank A/c		10,00,000	Dec. 31	By Depreciation A/c $10,00,000 \times \frac{20}{100} \times \frac{9}{12}$		1,50,000
				Dec. 31	By Balance c/d		8,50,000
			16,30,400				**16,30,400**

Distinction between Straight Line Method and Diminishing Balance Method

Basis	*Straight Line Method*	*Diminishing Balance Method*
Basis of Calculation	Depreciation is calculated on original cost of the asset.	Depreciation is calculated on original cost in first year and on written down value of the asset in subsequent years.
Amount of Depreciation	The amount of depreciation remains the same for all years.	The amount of depreciation goes on reducing year after year.
Value of Asset	The book value of the asset can be reduced to zero.	The book value of the asset can never be reduced to zero.
Depreciation and Repairs	The combined cost on account of depreciation and repairs is lower in the initial years and higher in the later years.	The combined cost on account of depreciation and repairs remains, more or less, equal throughout the period.

INTEXT QUESTIONS 14.4

I. State which of the following statements are true and which are false:

i. Amount of depreciation goes on reducing year after year in Straight Line Method.

ii. The amount of depreciation remains the same for all years in Diminishing Balance Method.

iii. The book value of the asset can be reduced to zero in Straight Line Method.

iv. The book value of the asset can never be reduced to zero in Diminishing Balance Method.

II. Multiple Choice Questions

i. Depreciation is charged on :

a) Stock of Goods b) Current Assets

c) Fixed Assets d) Liquid Assets

ii. Obsolescence term is due to :

a) Tear and wear of the Assets

b) Decrease in the value of the assets which are engaged in production

c) Development of improved or superior quality of equipment.

d) Due to usage and age of assets

iii. While charging depreciation on Fixed Assets by Straight line method, the value of the asset is taken into consideration is :

a) Original value b) Diminished value

c) Market value d) Book value

iv. While charging depreciation on Fixed assets by Reducing balance method, the value of the asset is taken into consideration is :

a) Original cost b) Diminished value

c) Market value d) Book value

v. The amount calculated for charging depreciation :

a) Includes the amount of scrap value of the Asset

b) Do not include the amount of scrap value of the asset

c) Cost of assets less scrap value

d) None of the above.

vi. Out of the following which is the cause of depreciation:

a) Normal wear and tear b) Scrap value

c) Cost of asset. d) Decrease or increase in market price

vii. Out of the following what will be the amount of annual depreciation :

a) Total Depreciation + installation charges cost

b) Total cost – Scrap value ÷ Expected life

c) Total cost + Scrap value ÷ Expected life

d) None of the above.

viii. Which one of the following is not a factor affecting annual depreciation on an asset.

a) Cost of the Asset b) Scrap Value of the asset

c) Useful life of the asset d) Annual maintenance on the asset.

ix. Out of the following on which asset depreciation will be charged :

a) Stock b) Debtors c) Machinery d) Land

x. Out of the following assets on which depreciation will not be charged:

a) Machinery b) Plant c) Photo Copier d) Stock

14.6 ASSET DISPOSAL ACCOUNT

If part of the asset is sold, it is appropriate to open a new account called as 'Assets Disposal Account'. In this case, method of recording the entries will depend on the fact whether :

i. Provision for Depreciation A/c is not maintained.

ii. Provision for Depreciation A/c is maintained.

I. When Provision for Depreciation A/c is not maintained, Journal Entries will be : Under this method depreciation is directly charged to the assets account. Thus, normally only the assets account is prepared.

(i) For Transfer of Book Value of Asset to Asset Disposal A/c

Assets Disposal A/c : Dr.
To Assets A/c

(ii) For Sale of Asset :

Bank A/c
To Assets Disposal A/c

(iii) For profit on Sale of Asset

Assets Disposal A/c
To Profit & Loss A/c

Notes

(iv) For loss on Sale of asset

Profit & Loss A/c
To Assets Disposal A/c

II. When Provision for Depreciation Account is maintained : (Accumulated Depreciation Account) Under this method, depreciation is not directly charged to the asset account. The amount of depreciation to be provided for the period is debited to depreciation account and credited to 'Provision for Depreciation Account' or 'Accumulated Depreciation Account'. Thus, entry will be as follows :

(i) For asset purchased :

Asset A/c Dr.
To Cash/Bank A/c

(ii) For depreciation charged :

Depreciation A/c Dr.
To provision for Depreciation A/c

(iii) For transfer of depreciation to Profit and Loss Account

Profit & Loss A/c Dr.
To Depreciation A/c

In the balance sheet, the asset appears at its original cost and provision for depreciation (or accumulated depreciation) appears on the liabilities side.

As the year passes, the balance of the accumulated depreciation goes on increasing since constant credit is given to this account in each accounting year. After the expiry of useful life, these two accounts are closed by debiting Accumulated Depreciation Account and crediting Asset Account and balance in asset account is transferred to Profit & Loss Account. Entry will be :

Provision for Depreciation A/c Dr.
To Asset A/c
(Balance of Prov. for depreciation to Asset A/c)

Profit & Loss A/c Dr.
To Asset A/c
(For loss on asset)

OR

Asset A/c Dr.
To Profit & Loss A/c
(For profit on asset)

Illustration 11

On January 1, 2012 X Ltd. purchased a machinery by cheque for ₹ 12,00,000. On July 1, 2014 a part of the machinery purchased on January 1, 2012 for ₹ 80,000 was sold for ₹ 45,000 and new machinery at a cost of ₹ 1,58,000 was purchased and installed on the same date. The company has adopted the method of providing 10% p.a. depreciation on the original cost of the machinery.

Give journal entries and show the necessary ledger accounts assuming that (i) Provision for Depreciation A/c is not maintained. (ii) Provision for Depreciation Account is maintained. The accounting year ends on 31st December.

Solution

(i) When Provision for Depreciation A/c is not maintained :

Date	*Particulars*	*L.F.*	*Dr.* ₹	*Cr.* ₹
2012				
Jan. 1	Machinery A/c Dr. To Bank A/c (For purchase of machinery)		12,00,000	12,00,000
Dec. 31	Depreciation A/c Dr. To Machinery A/c (For depreciation charged)		1,20,000	1,20,000
Dec. 31	Profit & Loss A/c Dr. To Depreciation A/c (For depreciation transferred to P/L A/c)		1,20,000	1,20,000
2013				
Dec. 31	Depreciation A/c Dr. To Machinery A/c (For depreciation charged)		1,20,000	1,20,000
Dec. 31	Profit & Loss A/c Dr. To Depreciation A/c (For depreciation transferred to P/L A/c)		1,20,000	1,20,000
2014				
July 1	Depreciation A/c Dr. To Machinery A/c (For current half yearly depreciation charged on machinery disposed)		4,000	4,000

July 1	Machinery Disposal A/c Dr. To Machinery A/c (For transfer to machinery disposal A/c at its book value)			60,000	60,000
July 1	Bank A/c Dr. To Machinery Disposal A/c (For sale of machine)			45,000	45,000
July 1	Machinery A/c Dr. To Bank A/c (For purchase of machinery)			1,58,000	1,58,000
Dec. 31	Depreciation A/c Dr. To Machinery A/c (For depreciation charged on remaining machinery)			1,19,900	1,19,900
Dec. 31	Profit & Loss A/c Dr. To Depreciation A/c (For depreciation transferred P/L A/c)			1,23,900	1,23,900
Dec. 31	Profit & Loss A/c Dr. To Machinery Disposal A/c (For Loss on sale of machinery transferred to P/L A/c)			15,000	15,000

Machinery Account

		₹			₹
2012			**2012**		
Jan. 1	To Bank A/c	12,00,000	Dec. 31	By Depreciation A/c	1,20,000
			Dec. 31	By Balance c/d	10,80,000
		12,00,000			12,00,000
2013			**2013**		
Jan. 1	To Balanced b/d	10,80,000	Dec. 31	By Depreciation A/c	1,20,000
			Dec. 31	By Balance c/d	9,60,000
		10,80,000			10,80,000
2014			**2014**		
Jan. 1	To Balance b/d	9,60,000	July 1	By Depreciation A/c (on 80,000 for 6 months @10%)	4,000

July 1	To Bank A/c	1,58,000	July 1	By Machinery Disposal A/c (Rs. 80,000-Rs. 20,000)	60,000
			Dec. 31	By Depreciation A/c	1,19,900[1]
				By Balance c/d	9,34,100
		11,18,000			11,18,000

Machinery Disposal Account

		₹			₹
2013			2014		
July 1	To Machinery A/c	60,000	July 1	By Bank (sale)	45,000
			Dec. 1	By Profit & Loss A/c (loss)	15,000
		60,000			60,000

(ii) Provision for Depreciation A/c is Maintained :

Journal

Date	*Particulars*	*L.F.*	*Dr. (₹)*	*Cr. (₹)*
2012				
Jan. 1	Machinery A/c Dr.		12,00,000	
	To Bank A/c			12,00,000
	(For purchase of machinery)			
Dec. 31	Depreciation A/c Dr.		1,20,000	
	To Provision for Depreciation A/c			1,20,000
	(For depreciation charged)			
Dec. 31	Profit & Loss A/c Dr.		1,20,000	
	To Depreciation A/c			1,20,000
	(For depreciation transferred to Profit & Loss A/c)			
2013				
Dec. 31	Depreciation A/c Dr.		1,20,000	
	To Provision for Depreciation A/c			1,20,000
	(For depreciation charged)			

Notes

Dec. 31	Profit & Loss A/c Dr. To Depreciation A/c (For depreciation transferred to Profit & Loss A/c)		1,20,000	1,20,000
2014				
July 1	Machinery Disposal A/c Dr. To Machinery A/c (For transfer to machinery disposal A/c)		80,000	80,000
July 1	Bank A/c Dr. To Machinery Disposal A/c (For sale of machine)		45,000	45,000
July 1	Depreciation A/c Dr. To Provision for Depreciation A/c (for current half yearly depreciation charged on machinery disposed)		4,000	4,000
July 1	Provision for Depreciation A/c Dr. To Machinery Disposal A/c (For transfer accumulated depreciation on machinery sold)		20,000	20,000
July 1	Machinery A/c Dr. To Bank A/c (For purchase of machinery)		1,58,000	1,58,000
Dec. 31	Depreciation A/c Dr. To Provision for Depreciation A/c (For depreciation charged on remaining machinery)		1,19,900	1,19,900
Dec. 31	Profit & Loss A/c Dr. To Depreciation A/c (For depreciation transferred P/L A/c)		1,23,900	1,23,900
Dec. 31	Profit & Loss A/c Dr. To Machinery Disposal A/c (For Loss on sale of machinery transferred to P/L A/c)		15,000	15,000

Machinery Account

		₹			₹
2012			**2012**		
Jan. 1	To Bank A/c	12,00,000	Dec. 31	By Balance c/d	12,00,000
2013			**2013**		
Jan. 1	To Balance b/d	12,00,000	Dec. 31	By Balance c/d	12,00,000
2014			**2014**		
Jan. 1	To Balance b/d	12,00,000	July 1	By Machinery Disposal A/c	80,000
July 1	To Bank A/c	1,58,000	Dec. 31	By Balance c/d	12,78,000
		13,58,000			13,58,000

Depreciation Account

		₹			₹
2012			**2012**		
Dec. 31	To Provision for Depreciation A/c	1,20,000	Dec. 31	By Profit & Loss A/c	1,20,000
2013			**2013**		
Dec. 31	To Provision for Depreciation A/c	1,20,000	Dec. 31	By Profit & Loss A/c	1,20,000
2014			**2014**		
July 1	To Provision for Depreciation A/c	4,000	Dec. 31	By Profit & Loss A/c	1,23,900
Dec. 31	To Provision for Depreciation A/c	1,19,900			
		1,23,900			1,23,900

Provision for Depreciation Account

		₹			₹
2012			**2012**		
Dec. 31	To Balance c/d	1,20,000	Dec. 31	Depreciation A/c	1,20,000

2013			**2013**		
Dec. 31	To Balance c/d	2,40,000	Jan. 1	By Balance b/d	1,20,000
			Dec. 31	By Depreciation A/c	1,20,000
		2,40,000			2,40,000
2014			**2014**		
Dec. 31	To Machinery		Jan. 1	By Balance b/d	2,40,000
	Disposal A/c	20,000[1]			
Dec. 31	To Balance c/d	3,43,900	July 1	By Depreciation A/c	
				(80,000 x 10/100 x 6/12)	4,000
			Dec. 31	By Depreciation A/c	1,19,900[2]
		3,63,900			3,63,900

Machinery Disposal Account

		₹			₹
2014			**2014**		
July 1	To Machinery A/c	80,000	July 1	By Bank A/c (Sale)	45,000
			July 1	By Provision on Depreciation A/c (8,000 + 8,000 + 4,000)	20,000
			Dec.31	By Profit & Loss A/c (loss)	15,000
		80,000			80,000

Note : (1) Calculation of Depreciation on machinery disposed off update :
Depreciation @ 10% on ₹ 80,000 for $2\frac{1}{2}$ year = 20,000.

(2) Calculation of Depreciation on machinery (other than sold)

(i)	On old machine (11,20,000 x 10/100)	1,12,000
(ii)	On new machine (1,58,000 x 10/100 x 6/12)	7,900
		1,19,900

Illustration 12

On 1st April 2011, X Ltd. purchased a plant for ₹ 5,00,000. On 1st July 2013, a part of plant purchased for ₹ 70,000 on 1st April 2011 was sold for ₹ 40,000 and a fresh plant was purchased for ₹ 1,00,000. Depreciation is provided @20% p.a. on reducing balance method and books of accounts are closed on 31st December each year.

Prepare Plant A/c., Provision for Depreciation A/c and Plant Disposal A/c.

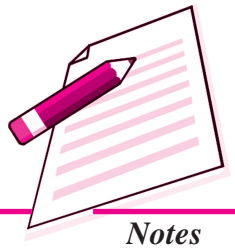
Solution :

Plant Account

		₹			₹
2011			**2011**		
April 1	To Bank A/c	5,00,000	Dec. 31	By Balance c/d	5,00,000
2012			**2012**		
Jan. 1	To Balance b/d	5,00,000	Dec. 31	By Balance c/d	5,00,000
2013			**2013**		
Jan. 1	To Balance b/d	5,00,000	July1	By Plant Disposal A/c	70,000
July 1	To Bank A/c	1,00,000	Dec. 31	By Balance c/d	5,30,000
		6,00,000			6,00,000

Provision for Depreciation Account

		₹			₹
2011			**2011**		
Dec. 31	To Balance c/d	75,000	Dec. 31	By Depreciation A/c	75,000
2012			**2012**		
Dec. 31	To Balance c/d	1,60,000	Jan. 1	By Balance b/d	75,000
			Dec. 31	By Depreciation A/c	85,000
		1,60,000			1,60,000
2013			**2013**		
July 1	To Plant Disposal A/c	27,160[1]	Jan. 1	By Balance b/d	1,60,000
			July 1	By Depreciation A/c (Rs. 47,600 for 1/2 year @ 20%)	4,760
July 1	To Balance c/d	2,06,080	Dec. 31	By Depreciation A/c	68,480[2]
		2,33,240			2,33,240



Notes

Plant Disposal Account

		₹			₹
2011			**2011**		
July 1	To Plant A/c	70,000	July 1	By Bank A/c (sale)	40,000
			July 1	By Prov. for Dep. A/c	27,160(1)
			July 1	By P & L A/c (loss)	2,480
		70,000			70,000

Note :

(1) Depreciation on Plant Sold :

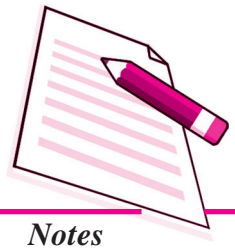
Particulars	₹
In 2011 on ₹ 70,000 for 9 months @ 20%	10,500
In 2012 on ₹ 59,500 (₹ 70,000 - ₹ 10,500) for 1 year - @ 20%	11,900
In 2013 on ₹ 47,600 (₹ 59,500 - ₹ 11,900) for 1/2 year @ 20%	4,760
Total	27,160

(2) Depreciation on Plant Retained :

		₹
Total Plant	₹ 5,30,000	
Less : Purchased on July, 2013 for ₹ 1,00,000 for 1/2 year @ 20% =		10,000
Old Plant purchased on		₹ 4,30,000
Plant retained ₹ 4,30,000 - 64,500 - 73,100 =		
	₹ 2,92,400 for 1 year @ 20%	58,480
	Total	68,480

WHAT YOU HAVE LEARNT

- Depreciation is the gradual and permanent decrease in the value of an asset due to efflux of time, wear and tear, obsolescence or any other reason.
- **Causes of Depreciation**
  - Physical Wear and Tear due to usage
  - Physical wear and tear due to passage of time



Notes

- Obsolescence due to advancement in technology

- **Objective of Depreciation**
  - To show the True Financial Position of the business.
  - To retain funds in the business for replacement of the Asset.
- **Methods of Charging Depreciation**
  - Straight Line Method
  - Diminishing Balance Method
- **Merits of Straight Line Method**
  - Simplicity
  - Assets can be Completely Written Off
- **Demerits of Straight Line Method**
  - Difficulty in Computation
  - Illogical
- **Merits of Diminishing Balance Method**
  - Equal burden on Profit & Loss Account.
  - Balance of Asset is never written Off to Zero
- **Demerits of Diminishing Balance Method**
  - Asset cannot be completely written off
  - Complexity

TERMINAL EXERCISE

1. What is depreciation? Write the various objectives of providing depreciation.
2. What are the causes of providing depreciation?
3. What are the two methods of providing depreciation? Explain their merits and demerits.
4. What are the objectives of providing depreciation?
5. Distinguish between Straight Line Method and Diminishing Balance Method of Depreciation.

6. Krishnamohan Limited purchased a machinery on October1, 2008 for ₹ 90,000 and spent ₹ 10,000 on its erection. The depreciation is to be charged @ 10% p. a. on original cost. Show the Machinery Account for three years if books are closed on March 31 every year.

7. On April 1, 2008 Aashi Limited purchased a machinery for ₹ 80,000 and spent ₹ 20,000 on its repairs and installation. On September 30, 2011, the machinery was sold for ₹ 60,000. Prepare Machinery Account for the year 2008 to 2011, if depreciation is charged @ 10% p. a. by Straight Line Method.

8. Ajay Kumar and Company purchased machinery for ₹ 20,000 on April 1, 2007. The Machinery is depreciated at 10% per annum on the straight line method. On October 1, 2010, the machinery was sold for ₹ 8,000.

   Give the Machinery Account if books are closed on March 31 every year.

9. A Plant is purchased for ₹ 80,000 on January 1, 2008. It is estimated that the residual value of the plant at the end of its working life of 10 years will be ₹ 27,894. Depreciation is to be provided at 10% p.a. on diminishing balance method.

   You are required to show the Plant Account for 4 years assuming that the books are closed on March 31 every year.

10. On January 1, 1987 Machinery Account showed a balance of ₹ 10,000. On 1st July, 1988, a new machine costing ₹. 6,000 was purchased. On 30th June, 1990, Machinery other than the machine bought on 1st July, 1988, was disposed off for ₹ 6,000.

    Show the Machinery Account for four years. The accounting year ends on 31st December, and depreciation is to be provided at 10% p.a. on written down value.

11. On 1.1.2010 X Ltd. purchased a machinery of Rs. 2,00,000 and spent ₹ 50,000 on its erection. Depreciation on the machinery was to be charged @ 20% p.a. on straight line method. On 30.6.2012 a piece of machinery included in machinery purchased on 1.1.2010 costing ₹ 20,000 was sold for ₹ 12,000.

    Prepare machinery account, machinery disposal account and provision for depreciation account.

ANSWERS TO INTEXT QUESTIONS

14.1 i) Diminution ii) Amount, life

iii) Life of assets iv) Technology

14.2 i) Same ii) Fixed instalment method, Original cost method

iii) Zero, Net Scrap value iv) More

14.3 i) Fall ii) Machinery iii) Original cost

iv) Opening balance of the year v) Zero

14.4 I. i) False ii) False i ii) True iv) True

II. i) c ii) c iii) a iv) b v) c

vi) a vii) b viii) d ix) c x) d

ACTIVITY

- Ask your parents about the date of various fixed assets purchased by them like T.V., Fridge, Motorcycle, Car etc., with its useful life and then calculate the amount of depreciation to be charged on each asset.